

## IMPACT OF TRANSOBTURATOR TAPE TREATMENT ON NOCTURIA IN PATIENTS WHO PRESENT MIXED URINARY INCONTINENCE

### Hypothesis / aims of study

Numerous studies have suggested that the mid-urethral sling procedure significantly reduces not only stress urinary incontinence (SUI) but also overactive bladder (OAB) symptoms. The present study determined the effects of the transobturator tape (TOT) procedure on the nocturia symptoms of patients with mixed urinary incontinence (MUI).

### Study design, materials and methods

In this retrospective cohort study, the medical records of 237 patients who underwent TOT surgery for treating women with MUI were reviewed. Of these, 86 (36.4%) patients had preoperative nocturia. Patients with neurological diseases or medicines that could affect the voiding pattern were excluded, giving a total of 70 patients finally enrolled. Pre- and postoperative evaluations consist of physical examination, 3 day frequency-volume charts and health-related quality of life questionnaires.

### Results

TOT significantly improved the nocturia symptom in King's Health Questionnaire (KHQ) and the OAB-questionnaire (OAB-q). Frequency-volume charts revealed that TOT significantly decreases the actual number of nightly voids (ANV) and nocturnal bladder capacity index (NBCi) in the entire cohort (Table 1). However, in a subgroup of women with nocturnal polyuria, there was no significant change in ANV or NBCi after sling operation. Correlation analysis of the whole cohort revealed that the postoperative changes in NBCi correlated positively with postoperative changes in ANV.

### Interpretation of results

TOT treatment appears to be associated with a reduction in nocturia in patients who present MUI. Over half of the patient (55.7%) achieving a cure of nocturia after TOT. TOT also significantly improved the health-related quality of life symptom scores. Patients with pure NP did not experience significant improvement in their nocturia.

### Concluding message

TOT appears to be associated with a reduction in nocturia in patients who present MUI. Improvement in nocturnal bladder capacity after TOT treatment may be attributed to a reduction in nocturia.

**Table 1. Change in actual number of nightly voids and nocturnal bladder capacity index according to severity and type of nocturia after transobturator tape in female mixed urinary incontinence.**

Variables	ANV		P-value	NBCi		P-value
	Preoperative	Postoperative		Preoperative	Postoperative	
Nocturia severity						
Mild (1 ≤ preop. ANV < 2)	1.20 ± 0.26	0.72 ± 0.69	< 0.001	0.12 ± 0.30	- 0.08 ± 0.38	0.026
Moderate (2 ≤ preop. ANV < 3)	2.23 ± 0.28	0.99 ± 0.78	0.001	0.69 ± 0.70	0.08 ± 0.67	0.019
Severe (preop. ANV ≥ 3)	3.42 ± 0.46	1.78 ± 1.13	0.043	1.26 ± 0.82	0.20 ± 0.81	0.018
Nocturia type						
Nocturnal polyuria	1.42 ± 0.68	1.33 ± 1.13	0.593	0.29 ± 0.71	0.13 ± 0.56	0.285
Reduced nocturnal bladder capacity	1.73 ± 0.89	0.73 ± 0.52	< 0.001	0.62 ± 0.69	0.06 ± 0.48	0.028
Mixed	1.77 ± 0.80	0.79 ± 0.74	< 0.001	0.43 ± 0.63	- 0.08 ± 0.59	0.001

### Disclosures

**Funding:** Nothing **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** IRB committee of Chungbuk National University Hospital **Helsinki:** Yes **Informed Consent:** Yes